

Information Disclosure Statement by Applicant - U.S. Patent Documents -

Form 1449A Modified		Application Number		09/893,292	
		Filing Date		June 26, 2001	
		First Named Inventor		Brad A. Armstrong	
		Art Unit		2629	
		Examiner Name		D. CHOW	
		Applicant's File Number		F28	
<div style="border: 1px solid black; border-radius: 50%; padding: 10px; display: inline-block; text-align: center;"> DEC 06 2006 PATENT & TRADEMARK OFFICE </div>					
Examiner Initials	US Patent Number	Publication Date	Patentee or Applicant Name	Relevant Information	US Class
DC	4503705	3/12/1985	POLCHANINOFF	Generally All	73/172
	4756076	7/12/1988	DYBEN ETAL	Generally All	29/613
	4845457	7/4/1989	NAKANISHI	Generally All	338/114
	4996511	2/26/1991	OHKAWA ET AL	Generally All	338/114
	3986254	10/19/1976	NORDSTROM	Generally All	29/613
	4640137	2/3/1987	TRULL ET AL	Generally All	73/862
	4715235	12/29/1987	FUKUI ET AL	Generally All	73/862
	4729809	3/8/1988	DERY ET AL	Generally All	156/306
	5453727	9/26/1995	SHIBASAKI ET AL	Generally All	33832R
	4426884	1/24/1984	POLCHANINOFF	Generally All	73/172
	4794365	12/27/1988	DUNBAR	Generally All	338/99
	4994781	2/19/1991	SAHAGEN	Generally All	338/47
	5455556	10/3/1995	OHM ET AL	Generally All	338/114
	4257305	3/24/1981	FRIEND ET AL	Generally All	84/690
	4481815	11/13/1984	OVERTON	Generally All	73/865
	4837548	6/6/1989	LODINI	Generally All	338/47
	5635683	6/3/1997	MCDERMOTT ET AL	Generally All	178/19.04
	5406852	4/18/1995	HIRAKA ET AL	Generally All	73/721
	5528214	6/18/1996	KOGA ET AL	Generally All	338/4
	4706505	11/17/1987	KING	Generally All	73/862
	4929804	5/29/1990	KAWAI ET AL	Generally All	200/5A
	5483994	1/16/1996	MAURER	Generally All	138/31
	5014224	5/7/1991	HANS	Generally All	338/99
	5510589	4/23/1996	ARNAL	Generally All	200/522
DC	4534420	8/13/1985	GOLDELIUS	Generally All	173/176
DC	4694231	9/15/1987	ALVITE	Generally All	318/568
DC	4738146	4/19/1988	BAUMGARTNER ET AL	Generally All	73/862
DC	4710744	12/1/1987	WAMSTAD	Generally All	338/4

Examiner Signature	/Doon Chow/	Date Considered	01/23/2007
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PTO/SB/08A (08-00)

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U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

IDS - 007 07/2003



Substitute for form 1448A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 12

Complete If Known

Application Number	
Filing Date	
First Named Inventor	Brad A. Armstrong
Group Art Unit	
Examiner Name	
Attorney Docket Number	

U.S. PATENT DOCUMENTS

Examiner Initials ¹	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document ²	Date of Publication of Cited Document ³ MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ⁴ (if known)			
DC		5200597		Eastman	1993	generally all
		5207426		Inoue	1993	" "
		5287089		Parsons	1994	" "
		5311779		Teruo	1994	" "
		5315204		Park	1994	" "
		5364108		Esnouf	1994	" "
		5365494		Lynch	1994	" "
		5376913		Pine	1994	" "
		5396235		Maeshima	1995	" "
		5440237		Brown	1995	" "
		5457478		Frank	1995	" "
		5640566		Victor	1997	" "
		5670955		Thorne	1997	" "
		5673237		Blank	1997	" "
		5675329		Barker	1997	" "
		5689285		Asher	1997	" "
		5764219		Rutledge	1998	" "
		5778404		Capps	1998	" "
		5790102		Nassima	1998	" "
		5847305		Yoshikawa	1998	" "

FOREIGN PATENT DOCUMENTS

Examiner Initials ¹	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document ²	Date of Publication of Cited Document ³ MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	TV
		Office ⁵	Number ⁶	Kind Code ⁷ (if known)				
DC			DE3031484		Gurndig	1982	generally all	
			DE3543890		Thomson-Brant	1987	" "	
			GB2113920		Alps Electric	1983	" "	
			GE2638462		Shin-Etsu Polymer	1981	" "	
			wo 9957630		Schneider	1999	" "	
			5-87760 Japan		Mitsumi Electric	1993	" "	
			JP7302159		Sega Enterprise	1995	" "	
			EP0470615		Nintendo Co.	1992	" "	
			0 470 615 A1		Nintendo Co.	1992	" "	
			DE4013227		Poulsom	1991	" "	

Examiner Signature	/Doon Chow/	Date Considered	01/24/2007
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¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

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Sheet 2 of 12

U.S. PATENT DOCUMENTS

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		Number	Kind Code ² (if known)			
DC		5565891		Armstrong	1996	generally all
		5589828		Armstrong	1996	" "
		5999084		Armstrong	1999	" "
		6102802		Armstrong	2000	" "
		6135886		Armstrong	2000	" "
		6198473		Armstrong	2001	" "
		6208271		Armstrong	2001	" "
		6222525		Armstrong	2001	" "
		3611068		Fujita	1971	" "
		3806471		Mithell	1974	" "
		3952173		Tsuji	1976	" "
		3988556		Hyodo	1976	" "
		4224602		Anderson	1980	" "
		4313113		Thornburg	1982	" "
		4315238		Eventoff	1982	" "
		4552360		Bromley	1985	" "
		4673919		Kataoka	1987	" "
		4786895		Castaneda	1988	" "
		4866542		Shimada	1989	" "
		5164697		Kramer	1992	" "

FOREIGN PATENT DOCUMENTS

Examiner Initials ¹	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ³
		Office ³	Number ⁴	Kind Code ⁵ (if known)				
DC			wo9532776		Namco	1995	generally all	
			ep1080753		Namco	2001	" "	
			jp6154422		Namco	1994	" "	
			jp9218737		Namco	1997	" "	
			ep1080753		Namco	2001	" "	
			ep0337458		Namco	1989	" "	
			ep0337458		Namco	1989	" "	
			jp7281824		Namco	1995	" "	
			ep0470615		Nintendo	1992	" "	
			ep0579448		Texas Instruments	1994	" "	

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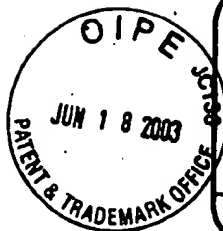
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Application Number
Filing Date
First Named Inventor **Brad A. Armstrong**
Group Art Unit
Examiner Name
Attorney Docket Number

Sheet **4** of **12**

U.S. PATENT DOCUMENTS

Examiner Initials ¹	Cite No. ¹	U.S. Patent Document Number Kind Code ² (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	
		THE BELOW LISTED DISCLOSURES FROM Questel-Orbit QWEB 1-24				pages
					(hereto attached)	
DC		5898359	Delco	1999	generally all	
		5550339	CTS Corp.	1996	" "	
		5847639	Interlink	1998	" "	
		5867808	IBM	1999	" "	
		5287089	Parsons	1994	" "	
		5132658	Sensym INC.	1992	" "	
		5196782	Luntron	1991	" "	
		4975676	Spectra	1990	" "	
		4694231	Alvite	1987	" "	
		4615252	Asahi	1986	" "	
		4301337	Eventoff	1981	" "	
		4314228	Eventoff	1982	" "	
		4315238	Eventoff	1982	" "	
		4268815	Eventoff	1981	" "	
		4276538	Eventoff	1981	" "	

FOREIGN PATENT DOCUMENTS

Examiner Initials ¹	Cite No. ¹	Foreign Patent Document Office ³ Number ⁴ Kind Code ⁵ (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
DC		jp11031606	Teikoku	1999	generally all	
		jp09223607	Teikoku	1997	" "	
		jp09213168	Teikoku	1997	" "	
		DE19606408	Contelec	1997	" "	
		GB2308448	Samsung	1997	" "	
		RU2010369	Smyslov	1994	" "	
		GB2267392	Collins	1993	" "	
		jp05151828	Yokohama	1993	" "	
		jp04155207	Yokohama	1992	" "	
		jp03108701	Canon	1991	" "	

Questel-Orbit data continued on next sheet

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² Unique citation designation number. ³ See attached Kinds of U.S. Patent Documents. ⁴ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁵ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁶ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁷ Applicant is to place a check mark here if English language translation is attached.

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		Office³	Number⁴				
DC			GB2233499		Mitsubishi	1991	generally all
↓ ↓			DE4019211		Lutron	1991	" "
			jp 02158105		Yokohama	1990	" "
			DE3634912		Link	1988	" "
			jp62160623		Yamatake	1987	" "
			jp60175401		Asahi	1985	" "

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6

of

12

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U. S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Sheet	7	of	12
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Application Number	
Filing Date	
First Named Inventor	Brad A. Armstrong
Group Art Unit	
Examiner Name	
Attorney Docket Number	

[illegible]

Examiner Signature	/Doon Chow/	Date Considered	01/24/2007
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Substitute for form 1449B/PTO			Complete if Known		
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)			Application Number		
			Filing Date		
			First Named Inventor	Brad A. Armstrong	
			Group Art Unit		
			Examiner Name		
Sheet	8	of	12	Attorney Docket Number	

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
DC		IBM TECHNICAL DISCLOSURE BULLETIN pp230-235 Feb. 1990 Mouse Ball-Actuating Device With Force And Tactile Feedback (generally all relevant)	
DC		RESEARCH DISCLOSURE November 1987 28373 Joystick with Tactile Feedback (generally all relevant)	

Examiner Signature	/Doon Chow/	Date Considered	01/24/2007
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			Filing Date		
			First Named Inventor	Brad A. Armstrong	
			Art Unit		
			Examiner Name		
Sheet	9	of	12	Attorney Docket Number	

U.S. PATENT DOCUMENTS					
Examiner Initials ¹	Cite No. ¹	Document Number Number - Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
DC		US- 5510812	1996	O'Mara	generally all
		US- 4469330	1984	Asher	generally all
		US- 4246452	1981	Chandler	generally all
		US- 5565891	1996	Armstrong	generally all
		US- D355901	1995	Bradley	generally all
		US- 4555960	1985	King	generally all
		US- 4924216	1990	Leung	generally all
		US- 4933670	1990	Wislocki	generally all
		US- 5065146	1991	Garrett	generally all
		US- 5128671	1992	Thomas, Jr.	generally all
		US- 5237311	1993	Wislocki	generally all
		US- 5293158	1994	Soma	generally all
		US- 5298919	1994	Chang	generally all
		US- 5329276	1994	Hirabayashi	generally all
		US- 2430284	1947	Evers	generally all
		US- 3693425	1972	Starita et al	generally all
		US- 3921445	1975	Hill et al	generally all
		US- 4099409	1978	Edmond	generally all
✓		US- 4216467	1980	Colston	generally all
		US- 4297542	1981	Shumway	generally all

FOREIGN PATENT DOCUMENTS					
Examiner Initials ¹	Cite No. ¹	Foreign Patent Document Country Code ³ - Number ⁴ - Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
DC		5-87760 (Japan)	1993	Mitsumi Elec.	generally all
		7-302159 (Japan)	1995	Sega Enter.	generally all
		0 470 615 A1 (EP)	1992	Nintendo	generally all
		0205726 (EP)	1986	Hal Lab INC	generally all
		739505 (SU)	1977	Baranov	generally all
✓		2205941 (GB)	1988	Garrett	generally all
		2240614 (GB)	1991	Dzholdasbekov	generally all

Examiner Signature	/Doon Chow/	Date Considered	01/24/2007
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² Applicant's unique citation designation number (optional). ³ See Kind Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ⁴ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁵ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁶ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁷ Applicant is to place a check mark here if English language translation is attached.

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		First Named Inventor	Brad A. Armstrong
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Sheet	10	of	12
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DC		us4348142	1982	Figour	generally all
		us4369663	1983	Venturullo et al	generally all
		us4414537	1983	Grimes	" "
		us4536746	1985	Gobeli	" "
		us4555960	1985	King	" "
		us4670743	1987	Zemke	" "
		us4684089	1987	van der Lely	" "
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		us4910503	1990	Broadsky	" "
		us4935728	1990	Kley	" "
		us5128671	1992	Thomas, Jr.	" "
		us5142931	1992	Menahem	" "
		us5168221	1992	Houston	" "
		us5189355	1993	Larkins et al	" "
		us5252952	1993	Frank et al	" "
		us5329276	1994	Hirabayashi	" "
		US-			
		US-			
		US-			

FOREIGN PATENT DOCUMENTS					
Examiner Initials ¹	Cite No. ¹	Foreign Patent Document Country Code ³ - Number ⁴ - Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
DC		0205726 (EP)	1986		generally all
		739505 (SU)	1977		generally all
		2205941 (GB)	1988		generally all
		2240614 (GB)	1991		generally all

Examiner Signature	/Doon Chow/	Date Considered	01/24/2007
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¹ EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

² Applicant's unique citation designation number (optional). ³ See Kind Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ⁴ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁵ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁶ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁷ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



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Complete if Known

Application Number	
Filing Date	
First Named Inventor	Brad A. Armstrong
Group Art Unit	
Examiner Name	

(use as many sheets as necessary)

Sheet	11	of	12	Attorney Docket Number
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Not all are prior art to the present invention

U.S. PATENT DOCUMENTS

Examiner Initials	Cite No. 1	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
DC		4766271		MITSUHASHI ET AL	1988	generally all
		4604509		CLANCY ET AL	1986	" "
		6256011		CULVER	2001	" "
		6231444		GOTO ET AL	2001	" "
		6001014		OGATA ET AL	1999	" "
		5984785		TAKEDA ET AL	1999	" "
		5294121		CHIANG	1994	" "
		5606594		REGISTER ET AL	1997	" "
		5391083		ROEBUCK ET AL	1995	" "
		5139439		SHIE	1992	" "
		6040821		FRANZ ET AL	2000	" "
		5396225		OKADA ET AL	1995	" "
		5999808		LADUE	1999	" "
		4858930		SATO	1989	" "
		5670988		TICKLE	1997	" "
		5184830		OKADA ET AL	1993	" "
		5552799		HASHIGUCHI	1996	" "
		5355352		KOBAYASHI ET AL	1994	" "
		5564560		MINELLI ET AL	1996	" "
		5923317		SAYLER ET AL	1999	" "

FOREIGN PATENT DOCUMENTS

[illegible]

Examiner Signature	/Doon Chow/	Date Considered	01/24/2007
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¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant to place a check mark here if English language Translation is attached.

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► [REDACTED]

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Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Complete if Known

Application Number	
Filing Date	
First Named Inventor	Brad A. Armstrong
Group Art Unit	
Examiner Name	
Attorney Docket Number	

(use as many sheets as necessary)

Sheet	12	of	12
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Not all are prior art to the present invention

U.S. PATENT DOCUMENTS

[illegible]

FOREIGN PATENT DOCUMENTS

[illegible]

**Examiner
Signature**

/Doon Chow/

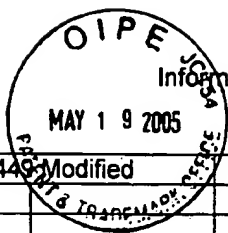
Date Considered

01/24/2007

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¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

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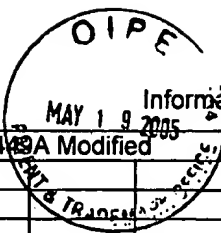
Information Disclosure Statement By Applicant - Foreign Patent Documents -

6

Form 1449 Modified		Application Number		09/893,292	
		Filing Date		June 26, 2001	
		First Named Inventor		Brad A. Armstrong	
		Art Unit		2675	
		Examiner Name		D. CHOW	
		Applicant's File Number		F28	
Examiner	Foreign Patent	Publication	Inventor or Applicant	Relevant Information	
Initials	Document No.	Date	Name		
		mm-dd-yyyy			
DC	WO9307606	04-15-1993	COPPER ETAL	Cited for related Interest	—
	JP6511340T	12-15-1994	COPPER ETAL	Cited for related Interest	—
	EP0606388	07-20-1994	COPPER ETAL	Cited for related Interest	—
	CA120502	04-15-1993	COPPER ETAL	Cited for related Interest	—
	AU2780892	05-03-1993	COPPER ETAL	Cited for related Interest	—
	AU667688	04-04-1996	COPPER ETAL	Cited for related Interest	—
	WO9806079	02-12-1998	MARTINELLI ETAL	Cited for related Interest	—
	EP0574213	12-15-1993	MILLER ETAL	Cited for related Interest	—
	DE69324067T	07-15-1999	MILLER ET AL	Cited for related Interest	—
	DE69324067D	04-29-1999	MILLER ET AL	Cited for related Interest	—
	WO9607981	03-14-1996	ALLEN ET AL	Cited for related Interest	—
	JP10505183T	05-19-1998	ALLEN ET AL	Cited for related Interest	—
	EP0777888	06-11-1997	ALLEN ET AL	Cited for related Interest	—
	AU3544495	03-27-1996	ALLEN ET AL	Cited for related Interest	—
	WO9607966	03-14-1996	ALLEN ET AL	Cited for related Interest	—
	KR264640	10-02-2000	ALLEN ET AL	Cited for related Interest	—
	JP10505182T	05-19-1998	ALLEN ET AL	Cited for related Interest	—
	EP0777875	06-11-1997	ALLEN ET AL	Cited for related Interest	—
	DE69521617D	08-09-2001	ALLEN ET AL	Cited for related Interest	—
	CN1166214	11-26-1997	ALLEN ET AL	Cited for related Interest	—
	AU3544395	03-27-1996	ALLEN ET AL	Cited for related Interest	—
	WO9718508	05-22-1997	ALLEN ET AL	Cited for related Interest	—
	JP11511580T	10-05-1999	ALLEN ET AL	Cited for related Interest	—
	EP0861462	09-02-1998	ALLEN ET AL	Cited for related Interest	—
↓	CN1202254	12-16-1998	ALLEN ET AL	Cited for related Interest	—
	JP1204098	08-16-1989	YAMAHA CORP	Cited for related Interest	—

Examiner Signature	/Doon Chow/	Date Considered	01/24/2007
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Information Disclosure Statement by Applicant - U.S. Patent Documents -

7

Form 1482A Modified		Application Number		09/893,292	
		Filing Date		June 26, 2001	
		First Named Inventor		Brad A. Armstrong	
		Art Unit		2675	
		Examiner Name		D. CHOW	
		Applicant's File Number		F28	
Examiner Initials	US Patent Number	Publication Date	Patentee or Applicant Name	Relevant Information	US Class
DC	5367631	11/22/1994	LEVY	Footnote 115 -- Special Interest	395/162
	5392337	2/21/1995	BAALS	Footnote 116 -- Special Interest	379/457
	5640152	6/17/1997	COPPER	Cited for related Interest	340/825
	4323888	4/6/1982	COLE	Footnote 117 -- Special Interest	341/34
	5485171	1/16/1996	COPPER ET AL	Cited for related Interest	345/160
	5714983	2/3/1998	SACKS	Cited for related Interest	345/168
	5258748	11/2/1993	JONES	Cited for related Interest	345/172
	6239790	5/29/2001	MARTINELLI ET AL	Cited for related Interest	345/174
	5841078	11/24/1998	MILLER ET AL	Cited for related Interest	178
	5648642	7/15/1997	MILLER ET AL	Cited for related Interest	178
	6239389	5/29/2001	ALLEN ET AL	Cited for related Interest	178
	5495077	2/27/1996	MILLER ET AL	Cited for related Interest	178
	5543588	8/6/1996	BISSET ET AL	Cited for related Interest	178
	5861583	1/19/1999	SCHEDIWY ET AL	Cited for related Interest	178
	5880411	3/9/1999	GILLESPIE ET AL	Cited for related Interest	178
	5942733	8/24/1999	ALLEN ET AL	Cited for related Interest	178
	5543591	8/6/1996	GILLESPIE ET AL	Cited for related Interest	178
	6028271	2/22/2000	GILLESPIE ET AL	Cited for related Interest	178
	5488204	1/30/1996	MEAD ET AL	Cited for related Interest	178
	5374787	12/20/1994	MILLER ET AL	Cited for related Interest	178
	5914465	6/22/1999	ALLEN ET AL	Cited for related Interest	178
	5543590	8/6/1996	GILLESPIE ET AL	Cited for related Interest	178
	5043721	8/27/1991	MAY, GREGORY	Cited for related Interest	
	5675524	10/7/1997	BERNARD, MARC	Cited for related Interest	

Examiner Signature	/Doon Chow/	Date Considered	01/24/2007
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form 1449A Modified P		Application Number		09/893,292	
		Filing Date		June 26, 2001	
		First Named Inventor		Brad A. Armstrong	
		Art Unit		2673	
		Examiner Name		D. CHOW	
		Applicant's File Number		F28	
Examiner Initials	US Patent Number	Publication Date	Patentee or Applicant Name	Relevant Information	US Class
DC	5367631	11/22/1994	LEVY	Footnote 115 -- Special Interest	395/162
	5392337	2/21/1995	BAALS	Footnote 116 -- Special Interest	379/457
	5640152	6/17/1997	COPPER	Cited for related Interest	340/825
	4323888	4/6/1982	COLE	Footnote 117 -- Special Interest	341/34
	5485171	1/16/1996	COPPER ET AL	Cited for related Interest	345/160
	5714983	2/3/1998	SACKS	Cited for related Interest	345/168
	5258748	11/2/1993	JONES	Cited for related Interest	345/172
	6239790	5/29/2001	MARTINELLI ET AL	Cited for related Interest	345/174
	5841078	11/24/1998	MILLER ET AL	Cited for related Interest	178
	5648642	7/15/1997	MILLER ET AL	Cited for related Interest	178
	6239389	5/29/2001	ALLEN ET AL	Cited for related Interest	178
	5495077	2/27/1996	MILLER ET AL	Cited for related Interest	178
	5543588	8/6/1996	BISSET ET AL	Cited for related Interest	178
	5861583	1/19/1999	SCHEDIWY ET AL	Cited for related Interest	178
	5880411	3/9/1999	GILLESPIE ET AL	Cited for related Interest	178
	5942733	8/24/1999	ALLEN ET AL	Cited for related Interest	178
	5543591	8/6/1996	GILLESPIE ET AL	Cited for related Interest	178
	6028271	2/22/2000	GILLESPIE ET AL	Cited for related Interest	178
	5488204	1/30/1996	MEAD ET AL	Cited for related Interest	178
	5374787	12/20/1994	MILLER ET AL	Cited for related Interest	178
	5914465	6/22/1999	ALLEN ET AL	Cited for related Interest	178
DC	5543590	8/6/1996	GILLESPIE ET AL	Cited for related Interest	178

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Examiner Signature	<i>D. Chow</i>	Date Considered	1/24/07
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Form 1449 Modified		Application Number		09/893,292	
		Filing Date		June 26, 2001	
		First Named Inventor		Brad A. Armstrong	
		Art Unit		2573	
		Examiner Name		D. Chow	
		Applicant's File Number		F28	
Examiner	Foreign Patent	Publication	Inventor or Applicant	Relevant Information	Previously
Initials	Document No.	Date	Name		Submitted
		mm-dd-yyyy			
DC	DE3543890	06-19-1987	THOMSON BRANDT	Footnote 82 -- Special Interest	Yes
	EP0470615	02-12-1992	NINTENDO CO	Footnote 81 -- Special Interest	Yes
	AU645462	01-13-1994	NINTENDO CO	Cited for Related Interest	—
	AU8142991	02-13-1992	NINTENDO CO	Cited for Related Interest	—
	CA2048167	02-10-1992	NINTENDO CO	Cited for Related Interest	—
	CN1058728	02-19-1992	NINTENDO CO	Cited for Related Interest	—
	DE69114400	12-14-1995	NINTENDO CO	Cited for Related Interest	—
	ES2079529	01-16-1996	NINTENDO CO	Cited for Related Interest	—
	GB2247107	02-19-1992	NINTENDO CO	Cited for Related Interest	—
	HK30195	03-17-1995	NINTENDO CO	Cited for Related Interest	—
	KR9705724	06-11-1997	BURR BROWN CORP	Cited for Related Interest	—
	MX9100564	04-01-1992	NINTENDO CO	Cited for Related Interest	—
	SG8095	06-16-1995		Cited for Related Interest	—
	DE3543890	06-19-1987	THOMSON BRANDT	Footnote 82 -- Special Interest	—
	EP0205726	12-30-1986	HAL LAB INC / Nakamura	Footnote 4 -- Special Interest	Yes
	SU739505	12-28-1977	BARANOV ETAL	Cited for Related Interest	Yes
	GB2205941	12-21-1988	IBM CORP	Cited for Related Interest	Yes
	GB2240614	08-07-1991	DZHDASBEKOV ETAL	Footnote 6 -- Special Interest	Yes
	GB2113920	08-10-1983	ALPS / Murata et al	Footnote 59 -- Special Interest	Yes
	DE19519941	03-13-1997	WERGEN	Cited for Related Interest	—
	EP0438919	07-31-1991	KAYE, ARTHUR	Cited for Related Interest	—
	EP0616298	09-21-1994	YANO ETAL	Cited for Related Interest	—
	JP5-87760	11-26-1993	MITSUMI / Furukawa	Footnote 48 -- Special Interest	Yes
	JP7302159	11-14-1995	SEGA / Terajima	Footnote 61-- Special Interest	Yes
	DE3031484	11-04-1982	GRUNDIG EMV	Cited for Related Interest	Yes
	DE3634912	04-28-1988	LINK KG	Cited for Related Interest	Yes
	DE4019211	01-03-1991	LUTRON ELECTRONICS	Cited for Related Interest	Yes
	DE19606408	08-28-1997	CONTELEC AG	Cited for Related Interest	Yes
	EP0337458	10-18-1989	NAMCO	Cited for Related Interest	Yes
	EP0579448	01-19-1994	TEXAS INSTRUMENTS	Footnote 84 -- Special Interest	—
	EP1080753	03-07-2001	NAMCO	Cited for Related Interest	Yes
	GB2058462	04-08-1981	SHINESU POLYMER	Cited for Related Interest	Yes
	GB2233499	01-09-1991	MITSUBISHI	Cited for Related Interest	Yes
	GB2267392	12-01-1993	PHILLIP COLLINS	Cited for Related Interest	Yes
	GB2308448	06-25-1997	SAMSUNG DISPLAY	Cited for Related Interest	Yes
	JP60175401	09-09-1985	ASAHI CHEMICAL	Cited for Related Interest	Yes
	JP62160623	07-16-1987	KANAZAWA ETAL	Cited for Related Interest	Yes
	JP02158105	06-18-1990	YOKOHAMA RUBBER	Cited for Related Interest	—
	JP2158105	06-18-1990	YOKOHAMA RUBBER	Cited for Related Interest	Yes
	JP3108701	05-08-1991	CANON INC	Cited for Related Interest	Yes
	JP04155707	05-28-1992	YOKOHAMA RUBBER	Cited for Related Interest	—
✓	JP4155707	05-28-1992	YOKOHAMA RUBBER	Cited for Related Interest	Yes
	JP5151828	06-18-1993	YOKOHAMA RUBBER	Cited for Related Interest	Yes

Examiner
Signature

/Doon Chow/

Date
Considered

05/27/2006

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Examiner Initials	Foreign Patent Document No.	Publication Date mm-dd-yyyy	Inventor or Applicant Name	Relevant Information	Previously Submitted
DC	JP6154422	06-03-1994	NAMCO	Cited for Related Interest	Yes
	JP7281824	10-27-1995	NAMCO	Cited for Related Interest	Yes
	JP09213168	08-15-1997	KOIZUMI ETAL	Cited for Related Interest	Yes
	JP9218737	08-19-1997	NAMCO	Cited for Related Interest	Yes
	JP9223607	08-26-1997	KOIZUMI ETAL	Cited for Related Interest	Yes
	JP11031606	02-02-1999	KOIZUMI ETAL	Cited for Related Interest	Yes
	RU2010369	03-30-1994	SMYSLOV	Cited for Related Interest	Yes
	WO9532776	12-07-1995	FUJIWARA ETAL	Cited for Related Interest	Yes
	WO9957630	11-11-1999	SCIENTIFIC ATLANTA	Cited for Related Interest	Yes
	EP0905725	03-31-1999	EATON CORP	Cited for Related Interest	Yes
	GB2155953	10-02-1985	PERMELEC ELEC.	Cited for Related Interest	Yes
	WO9718508	05-22-1997	SYNAPTICS INC	Footnote 91 -- Special Interest	Yes
	DE4013227	05-29-1991	POULSOM ETAL	Footnote 97 -- Special Interest	Yes
	CA2038894	05-24-1994	PARK	Cited for Related Interest	Yes
	WO9428387	08-08-1995	BROWN ETAL	Cited for Related Interest	Yes
	DE69306678	01-30-1997	TEXAS INSTRUMENTS	Cited for Related Interest	Yes
	JP6058419	03-01-1994	TEXAS INSTRUMENTS	Cited for Related Interest	Yes
	WO9318475	12-31-1996	ARMSTRONG	Cited for Related Interest	Yes
	EP0451676	10-16-1991	Nokia Unterhaltungselektro	Footnote 85 -- Special Interest	Yes
	DE4011636	10-24-1991	Nokia Unterhaltungselektro	Cited for Related Interest	Yes
	JP4230918	08-19-1992	Nokia Unterhaltungselektro	Cited for Related Interest	Yes
	AU544234	05-23-1985	EVENTOFF	Cited for Related Interest	Yes
	CA1143030	03-15-1983	EVENTOFF	Cited for Related Interest	Yes
	CA1153801	09-13-1983	EVENTOFF	Cited for Related Interest	Yes
	CA1161921	02-07-1984	EVENTOFF	Cited for Related Interest	Yes
	CA1153577	09-13-1983	EVENTOFF	Cited for Related Interest	Yes
	CA1153802	09-13-1983	EVENTOFF	Cited for Related Interest	Yes
	CA1153803	09-13-1983	EVENTOFF	Cited for Related Interest	Yes
	DE3044384	08-27-1981	EVENTOFF	Cited for Related Interest	Yes
	FR2470435	05-29-1981	EVENTOFF	Cited for Related Interest	Yes
	GB2064873	06-17-1981	EVENTOFF	Cited for Related Interest	Yes
	GB2134320	08-08-1984	EVENTOFF	Cited for Related Interest	Yes
	GB2134321	08-08-1984	EVENTOFF	Cited for Related Interest	Yes
	GB213422	08-08-1984	EVENTOFF	Cited for Related Interest	Yes
	IT1143185	10-22-1986	EVENTOFF	Cited for Related Interest	Yes
	JP1976280	10-17-1995	EVENTOFF	Cited for Related Interest	Yes
	JP5196524	08-06-1993	EVENTOFF	Cited for Related Interest	Yes
	JP6058276	08-03-1994	MASUDA MASANORI	Cited for Related Interest	Yes
	JP2108444	11-06-1996	ITOYAMA SEIJI	Cited for Related Interest	Yes
	JP5197381	08-06-1993	EVENTOFF	Cited for Related Interest	Yes
	JP6101567	12-12-1994	RIKEN CORP	Cited for Related Interest	Yes
	JP1125871	05-18-1989	EVENTOFF	Cited for Related Interest	Yes
	JP1993198	11-22-1995	EVENTOFF	Cited for Related Interest	Yes
	JP5022398	03-29-1993	CANON INC	Cited for Related Interest	Yes
	NL8006409	06-16-1981	EVENTOFF	Cited for Related Interest	Yes
	SE452925	12-21-1987	EVENTOFF	Cited for Related Interest	Yes
	SE8008205	05-27-1981	EVENTOFF	Cited for Related Interest	Yes
	JP1710832	11-11-1992	EVENTOFF	Cited for Related Interest	Yes
	JP2049029	10-26-1990	NIPPON TELEGR	Cited for Related Interest	Yes
	JP56108279	08-27-1981	EVENTOFF	Cited for Related Interest	Yes
	WO9304348	03-04-1993	HILTON	Cited for Related Interest	Yes

Examiner Signature	/Doon Chow/	Date Considered	05/27/2006
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Examiner Initials	Foreign Patent Document No.	Publication Date	Inventor or Applicant Name	Relevant Information	Previously Submitted
DC	DE3687571	03-04-1993	HILTON	Cited for Related Interest	✓
	EP0227432	07-01-1987	HILTON	Cited for Related Interest	✓
	JP1875027	09-26-1994	HILTON	Cited for Related Interest	✓
	JP62177426	08-04-1987	HILTON	Cited for Related Interest	✓
	GB2133957	08-01-1984	BOUGHTON	Cited for Related Interest	✓
	CN1202254	12-16-1998	SYNAPTICS INC	Cited for Related Interest	✓
	EP0861462	09-02-1998	SYNAPTICS INC	Cited for Related Interest	✓
	JP11511580	10-05-1999	SYNAPTICS INC	Cited for Related Interest	✓
	AU557120	12-04-1986	BOUGHTON	Cited for Related Interest	✓
	AU2379484	08-02-1984	BOUGHTON	Cited for Related Interest	✓
	ZA8400356	08-29-1984	BOUGHTON	Cited for Related Interest	✓
	EP0835876	04-15-1998	SEGA ENTERPRISES	Cited for Related Interest	Yes
	CA1203738	04-29-1986	CAE ELECTRONICS	Cited for Related Interest	✓
	DE4004760	08-22-1991	DZOLDASBEKOV ETAL	Cited for Related Interest	✓
	JP61292734	12-23-1986	HAL LAB INC.	Cited for Related Interest	✓
	EP0295368	12-21-1988	IBM CORP	Cited for Related Interest	✓
	JP4077335	12-08-1992	NKK CORP	Cited for Related Interest	✓
	JP63318623	12-27-1991	IBM (US)	Cited for Related Interest	✓
	DE19803627	08-05-1999	BALTUS RENE	Cited for Related Interest	✓
	JP9223607	08-26-1997	KOIZUMI ETAL	Cited for Related Interest	✓
	WO9522828	08-24-1995	INTERLINK ELECTRONIC	Cited for Related Interest	✓
	EP663648	07-19-1995	IBM CORP.	Cited for Related Interest	✓
	JP5151828	06-18-1993	YOKOHAMA RUBBER	Cited for Related Interest	✓
	EP0169624	01-29-1986	ASAHI ETAL	Cited for Related Interest	✓
	GB2159953	12-11-1985	STC PLC	Cited for Related Interest	✓
	EP0050231	12-06-1983	BOSCH-SIEMENS	Cited for Related Interest	✓
↓	JP5326217	10-12-1993	MITSUMI / Furukawa	Cited for Related Interest	✓
	JP 63-029113	08-16-1989	YAMAHA CORP.	Cited for Related Interest	✓

Examiner Signature	/Doon Chow/	Date Considered	05/27/2006
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form 1449A Modified			Application Number		09/893,292	
			Filing Date		June 26, 2001	
			First Named Inventor		Brad A. Armstrong	
			Art Unit		2673	
			Examiner Name		D. Chow	
			Applicant's File Number		F28	
Examiner Initials	US Patent Number	Publication Date	Patentee or Applicant Name	Relevant Information	US Class	Previously Submitted
DC						
	2430284	11/4/1947	EVERS	Cited for Related Interest	341/187	Yes
	3296862	1/10/1967	DURAND	Cited for Related Interest	74/471	—
	3611068	10/5/1971	FUJITA	Footnote 23 -- Special Interest	338/2	Yes
	3693425	9/26/1972	STARITA ETAL	Cited for Related Interest	73/862.044	Yes
	3710050	1/9/1973	RICHARDS	Cited for Related Interest	200/61.43	—
	3771037	11/6/1973	BAILEY	Cited for Related Interest	318/580	Yes
	3806471	4/23/1974	MITCHELL	Footnote 80 -- Special Interest	252/519	Yes
	3921445	11/25/1975	HILL ETAL	Cited for Related Interest	73/862	Yes
	3952173	4/20/1976	TSUJI ETAL	Cited for Related Interest	200/511	Yes
	3988556	10/26/1976	HYODO	Cited for Related Interest	200/511	Yes
	3993884	11/23/1976	KONDUR ETAL	Footnote 75 -- Special Interest	200/295	—
	4099409	7/11/1978	EDMOND	Cited for Related Interest	73/862	Yes
	4133012	1/2/1979	TAKAMIYA ETAL	Footnote 77 -- Special Interest	360/90	—
	4158759	6/18/1979	MASON	Footnote 41 -- Special Interest	219/720	Yes
	4164634	8/14/1979	GILANO	Cited for Related Interest	200/5A	—
	4216467	8/5/1980	COLSTON	Cited for Related Interest	341/20	Yes
	4224602	9/23/1980	ANDERSON ETAL	Cited for Related Interest	340/321	Yes
	4246452	1/20/1981	CHANDLER	Footnote 62 -- Special Interest	200/5A	Yes
	4268815	5/19/1981	EVENTOFF	Cited for Related Interest	338/69	Yes
	4276538	6/30/1981	EVENTOFF	Cited for Related Interest	338/69	Yes
	4297542	10/27/1981	SHUMWAY	Cited for Related Interest	200/6A	Yes
	4301337	11/17/1981	EVENTOFF	Cited for Related Interest	200/5A	Yes
	4313113	1/26/1982	THORNBURG	Footnote 28 -- Special Interest	345/159	Yes
	4314228	2/2/1982	EVENTOFF	Cited for Related Interest	338/114	Yes
	4314227	2/2/1982	EVENTOFF	Cited for Related Interest	338	—
	4315238	2/9/1982	EVENTOFF	Cited for Related Interest	338	Yes
	4348142	9/7/1982	FIGOUR	Cited for Related Interest	414/2	Yes
	4349708	9/14/1982	ASHER	Cited for Related Interest	200/6A	—
	4369663	1/25/1983	VENTURELLO ETAL	Cited for Related Interest	73/862.043	Yes
	4369971	1/25/1983	CHANG ETAL	Cited for Related Interest	463/2	—
	4385841	5/31/1983	KRAMER	Cited for Related Interest	368/29	—
	4406217	9/27/1983	OOTA	Footnote 42 -- Special Interest	99/280	Yes
	4408103	10/4/1983	SMITH	Cited for Related Interest	200/6A	—
	4414537	11/8/1983	GRIMES	Cited for Related Interest	341/20	Yes
	4419653	12/6/1983	WAIGAND	Cited for Related Interest	338/114	—
	4420808	12/13/1983	DIAMOND ETAL	Cited for Related Interest	701/4	—
	4469330	9/4/1984	ASHER	Cited for Related Interest	463/38	Yes
	4469930	9/4/1984	TAKAHASHI	Cited for Related Interest	219/121.72	—
	4489302	12/18/1984	EVENTOFF	Cited for Related Interest	338/99	—
	4490587	12/25/1984	MILLER	Cited for Related Interest	200/5	—
	4491325	1/1/1985	Bersheim	Footnote 91 -- Special Interest	463/38	—
	4504059	3/12/1985	Weinrieb	Cited for Related Interest	273/148	—
	4514600	4/30/1985	LENTZ	Cited for Related Interest	200/5R	—
↓	4536748	8/20/1985	GOBELI	Cited for Related Interest	341/20	Yes

Examiner Signature	/Doon Chow/	Date Considered	05/27/2006
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Examiner Initials	US Patent Number	Publication Date	Patentee or Applicant Name	Relevant Information	US Class	Previously Submitted
DC	4536746	8/20/1985	GOBELI	Footnote 26 -- Special Interest	341/20	---
	4548347	10/8/1985	KIRSCH	Cited for Related Interest	345/166	---
	4552360	11/12/1985	BROMLEY ETAL	Cited for Related Interest	463/38	Yes
	4555960	12/3/1985	KING	Footnote 1 -- Special Interest	74/471XY	Yes
	4573682	3/4/1986	Mayon	Cited for Related Interest	273/148	---
	4604509	8/5/1986	CLANCY ETAL	Cited for Related Interest	200/513	Yes
	4604502	8/5/1986	Thomas	Footnote 92 -- Special Interest	200/6A	---
	4615252	10/7/1986	YAMAUCHI ETAL	Cited for Related Interest	84/687	Yes
	4630823	12/23/1986	Grant	Cited for Related Interest	273/148	---
	4647916	3/3/1987	BOUGHTON	Cited for Related Interest	345/156	---
	4667271	5/19/1987	WILSON	Cited for Related Interest	361/725	---
	4670743	6/2/1987	ZEMKE	Cited for Related Interest	345/157	Yes
	4673919	6/18/1987	KATAOKA	Cited for Related Interest	341/11	Yes
	4680577	7/14/1987	STRAAYER ETAL	Footnote 67 -- Special Interest	345/160	Yes
	4684089	8/4/1987	LELY	Cited for Related Interest	248/124.1	Yes
	4687200	8/18/1987	SHIRAI	Cited for Related Interest	463/37	---
	4694231	9/15/1987	ALVITE	Cited for Related Interest	318/568.11	Yes
	4724292	2/9/1988	ICHIKAWA	Cited for Related Interest	219/708	---
	4733214	3/22/1988	ANDRESEN	Cited for Related Interest	219/708	Yes
	4745301	5/17/1988	MICHALCHIK	Cited for Related Interest	307/119	---
	4766271	8/23/1988	MITSUHASHI ETAL	Cited for Related Interest	200/512	Yes
	4786895	11/22/1988	CASTANEDA	Cited for Related Interest	345/160	Yes
	4811608	3/14/1989	HILTON	Cited for Related Interest	73/862.043	Yes
	4855704	8/8/1989	BETZ	Cited for Related Interest	336/132	Yes
	4858930	8/22/1989	SATO	Footnote 54 -- Special Interest	463/23	Yes
	4866542	9/12/1989	SHIMADA ETAL	Cited for Related Interest	386/69	Yes
	4886544	9/12/1989	HASHIMOTO	Cited for Related Interest	360/40	---
	4879556	11/7/1989	DUIMEL	Footnote 16 -- Special Interest	341/20	---
	4910503	3/20/1990	BRODSKY	Cited for Related Interest	345/161	Yes
	4909514	3/20/1990	Tano	Footnote 94 -- Special Interest	273/148	---
	4924216	5/8/1990	LEUNG	Footnote 11 -- Special Interest	463/38	Yes
	4933670	6/12/1990	WISLOCKI	Footnote 10 -- Special Interest	345/167	Yes
	4935728	8/19/1990	KLEY	Footnote 5 -- Special Interest	345/161	Yes
	4962448	10/9/1990	DEMAIO ETAL	Cited for Related Interest	700/17	---
	4975676	12/4/1990	GREENHALGH	Cited for Related Interest	338/114	Yes
	5038144	8/6/1991	Kaye	Cited for Related Interest	341/176	---
	5059958	10/22/1991	JACOBS ETAL	Cited for Related Interest	345/158	Yes
	5065148	11/12/1991	GARRETT	Footnote 13 -- Special Interest	345/161	Yes
	5068498	11/26/1991	ENGEL	Cited for Related Interest	200/6A	---
	5103404	4/7/1992	MCINTOSH	Cited for Related Interest	318/568	Yes
	5116051	5/26/1992	MONCRIEF ETAL	Cited for Related Interest	463/36	---
	5128671	7/7/1992	THOMAS	Cited for Related Interest	341/20	Yes
	5132658	7/21/1992	DAUENHAUER ETAL	Cited for Related Interest	338/92	Yes
	5139439	8/18/1992	SHIE	Cited for Related Interest	439/359	Yes
	5142931	9/1/1992	MENAHAM	Footnote 7 -- Special Interest	74/471XY	Yes
	5164697	11/17/1992	KRAMER	Footnote 58 -- Special Interest	338/69	Yes
	5168221	12/1/1992	HOUSTON	Cited for Related Interest	324/207	Yes
	5182796	1/26/1993	SHIBAYAMA ETAL	Cited for Related Interest	345/841	---
	5183998	2/2/1993	HOFFMAN ETAL	Cited for Related Interest	219/492	---
	5184830	2/9/1993	OKADA ETAL	Footnote 51 -- Special Interest	463/29	Yes
✓	5189355	2/23/1993	LARKINS ETAL	Cited for Related Interest	318/685	Yes
	5196782	3/23/1993	D'ALEO ETAL	Cited for Related Interest	323/320	Yes

Examiner Signature	/Doon Chow/	Date Considered	05/27/2006
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 806. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Examiner Initials	US Patent Number	Publication Date	Patentee or Applicant Name	Relevant Information	US Class	Previously Submitted
DC	5200597	4/6/1993	EASTMAN	Cited for Related Interest	235/455	Yes
	5203563	4/20/1993	LOPER	Footnote 64 -- Special Interest	273/148B	Yes
	5207426	5/4/1993	INOUE ET AL	Footnote 20 -- Special Interest	463/36	Yes
	5222400	6/29/1993	HILTON	Footnote 88 -- Special Interest	73/862	Yes
	5231386	7/27/1993	BRANDENBURG ETAL	Footnote 18 -- Special Interest	345/174	Yes
	5237311	8/17/1993	MAILEY ETAL	Cited for Related Interest	345/167	Yes
	5250930	10/5/1993	YOSHIDA ETAL	Footnote 15 -- Special Interest	345/168	Yes
	5252952	10/12/1993	FRANK ETAL	Footnote 3 -- Special Interest	345/157	Yes
	5259626	11/9/1993	HO	Cited for Related Interest	463/37	Yes
	5264768	11/23/1993	GREGORY ETAL	Footnote 32 -- Special Interest	318/561	Yes
	5271290	12/21/1993	FISCHER	Cited for Related Interest	74/471XY	Yes
	D342740	12/28/1993	PARKER	Cited for Related Interest	D14/218	Yes
	5278557	1/11/1994	STOKES ETAL	Cited for Related Interest	341/34	Yes
	5280926	1/25/1994	SOGGE ETAL	Cited for Related Interest	277/641	Yes
	5287089	2/15/1994	PARSONS	Cited for Related Interest	345/156	Yes
	5286024	2/15/1994	WINBLAD	Cited for Related Interest	273/148B	Yes
	5293158	3/8/1994	SOMA	Cited for Related Interest	345/161	Yes
	5294121	3/15/1994	CHIANG	Footnote 52 -- Special Interest	273/148B	Yes
	5298919	3/29/1994	CHANG	Cited for Related Interest	345/163	Yes
	5311779	5/17/1994	TERUO	Cited for Related Interest	73/726	Yes
	5313229	5/17/1994	GILLIGAN ETAL	Cited for Related Interest	345/167	Yes
	5315204	5/24/1994	PARK	Footnote 50 -- Special Interest	310/339	Yes
	5327201	7/5/1994	COLEMAN ETAL	Footnote 70 -- Special Interest	399/342	Yes
	5329276	7/12/1994	HIRABAYASHI	Cited for Related Interest	340/870.31	Yes
	5333057	7/26/1994	MORIKAWA ETAL	Cited for Related Interest	358/296	Yes
	5345807	9/13/1994	BUTTS ETAL	Footnote 73 -- Special Interest	73/1.15	Yes
	5349371	9/20/1994	FONG	Cited for Related Interest	345/166	Yes
	5355352	10/11/1994	KOBAYASHI ETAL	Footnote 37 -- Special Interest	368/281	Yes
	5364108	11/15/1994	ESNOUF	Cited for Related Interest	368/281	Yes
	5365494	11/15/1994	LYNCH	Footnote 39 -- Special Interest	368/10	Yes
	5376913	12/27/1994	PINE ETAL	Cited for Related Interest	338/114	Yes
	5386084	1/31/1995	RISKO	Cited for Related Interest	174/52.3	Yes
	5389757	2/14/1995	SOLIERE	Footnote 57 -- Special Interest	200/345	Yes
	5391083	2/21/1995	ROEBUCK ETAL	Cited for Related Interest	174/52.3	Yes
	D355901	2/28/1995	BRADLEY	Cited for Related Interest	D14/410	Yes
	5384168	2/28/1995	SMITH, III, ETAL	Cited for Related Interest	345/156	Yes
	5396235	3/7/1995	MAESHIMA	Footnote 92 -- Special Interest	341/34	Yes
	5396225	3/7/1995	OKADA ETAL	Footnote 55 -- Special Interest	463/40	Yes
	5399823	3/21/1995	MCCUSKER	Footnote 74 -- Special Interest	200/521	Yes
	5419613	5/30/1995	Wedeking	Cited for Related Interest	297/217	Yes
	5440237	8/8/1995	BROWN ETAL	Footnote 83 -- Special Interest	324/601	Yes
	5452615	9/26/1995	HILTON	Cited for Related Interest	73/862	Yes
	5457478	10/10/1995	FRANK	Cited for Related Interest	345/158	Yes
	5459487	10/17/1995	BOUTON	Cited for Related Interest	463/37	Yes
	5467108	11/14/1995	MIMLITCH	Cited for Related Interest	345/161	Yes
	5487053	1/23/1996	BEISWENGER ETAL	Cited for Related Interest	368/69	Yes
	5499041	3/12/1996	BRANDENBURG ETAL	Footnote 33 -- Special Interest	345/174	Yes
	5508719	4/16/1996	GERVAIS	Cited for Related Interest	345/157	Yes
	5510812	4/23/1996	O'MARA ETAL	Footnote 38 -- Special Interest	345/161	Yes
	5512892	4/30/1996	Corballis	Footnote 93 -- Special Interest	341/22	Yes
✓	5517211	5/14/1996	KWANG-CHIEN	Cited for Related Interest	345/168	Yes
	5528265	6/18/1996	Harrison	Cited for Related Interest	345/158	Yes

Examiner Signature	/Doon Chow/	Date Considered	05/27/2006
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Examiner Initials	US Patent Number	Publication Date	Patentee or Applicant Name	Relevant Information	US Class	Previously Submitted
DC	5530455	6/25/1996	GILICK ETAL	Cited for Related Interest	345/163	—
	5541622	7/30/1996	ENGLE ETAL	Footnote 34 -- Special Interest	345/161	—
	5543781	8/6/1996	GANUCHEAU, JR. ETAL	Footnote 68 -- Special Interest	340/7.52	—
	5550339	8/27/1996	HAUGH	Cited for Related Interest	200/5A	Yes
	5552799	9/3/1996	HASHIGUCHI	Footnote 53 -- Special Interest	345/3.2	Yes
	5551693	9/3/1996	GOTO ETAL	Cited for Related Interest	463/37	—
	5555004	9/10/1996	ONO ETAL	Cited for Related Interest	345/161	Yes
	5559432	9/24/1996	LOGUE	Cited for Related Interest	324/207.17	—
	5565891	10/15/1996	ARMSTRONG	Footnote 90 -- Special Interest	345/167	Yes
	5564560	10/15/1996	MINELLI ETAL	Footnote 60 -- Special Interest	200/516	Yes
	5589828	12/31/1996	ARMSTRONG	Footnote 89 -- Special Interest	341/20	Yes
	5591924	1/7/1997	HILTON	Cited for Related Interest	73/862	—
	5602569	2/11/1997	KATO	Cited for Related Interest	345/158	—
	5606594	2/25/1997	REGISTER ETAL	Cited for Related Interest	455/556.2	Yes
	5607158	3/4/1997	Chan	Cited for Related Interest	273/148B	—
	5615083	3/25/1997	Burnett	Cited for Related Interest	361/686	—
	5640566	6/17/1997	VICTOR ETAL	Cited for Related Interest	717/113	Yes
	5644113	7/1/1997	DATE ETAL	Cited for Related Interest	200/5R	—
	56381982	8/5/1997	ZEITMAN	Cited for Related Interest	D14/162	—
	5657051	8/12/1997	LIAO	Cited for Related Interest	345/163	—
	5659334	8/19/1997	YANIGER ETAL	Cited for Related Interest	345/156	—
	4045650	8/30/1997	NESTOR	Cited for Related Interest	200/556	—
	5670955	9/23/1997	THORN ETAL	Footnote 24 -- Special Interest	341/34	Yes
	5670988	9/23/1997	TICKLE	Cited for Related Interest	345/157	Yes
	5689818	9/23/1997	THORNER ETAL	Cited for Related Interest	463/30	Yes
	5673237	9/30/1997	BLANK	Cited for Related Interest	368/10	Yes
	5675329	10/7/1997	BARKER ETAL	Cited for Related Interest	341/22	Yes
	5675309	10/7/1997	DEVOLPI	Cited for Related Interest	338/68	—
	5675359	10/7/1997	ANDERSON	Cited for Related Interest	345/161	—
	5684759	11/4/1997	HUANG ETAL	Cited for Related Interest	368/10	—
	5687080	11/11/1997	HOYT ETAL	Footnote 14 -- Special Interest	700/85	—
	5689285	11/18/1997	ASHER	Footnote 30 -- Special Interest	345/161	Yes
	5706027	1/6/1998	HILTON ETAL	Cited for Related Interest	345/156	—
	5704612	1/6/1998	KELLY ETAL	Cited for Related Interest	273/402	—
	5716274	2/10/1998	GOTO ETAL	Cited for Related Interest	463/37	—
	5738352	4/14/1998	OHKUBO ETAL	Cited for Related Interest	273/148B	—
	5749577	5/12/1998	COUCH ETAL	Cited for Related Interest	273/148B	—
	5764219	6/9/1998	RUTLEDGE ET AL	Footnote 21 -- Special Interest	345/159	Yes
	5767840	6/16/1998	SELKER	Cited for Related Interest	345/161	—
	5767839	6/16/1998	ROSENBERG	Cited for Related Interest	345/161	—
	5767840	6/16/1998	SELKER	Cited for Related Interest	345/161	—
	5774109	6/30/1998	WINKSY ETAL	Cited for Related Interest	345/685	—
	5778404	7/7/1998	CAPPS ETAL	Cited for Related Interest	715/531	Yes
	5781807	7/14/1998	GLASSGOLD ETAL	Footnote 79 -- Special Interest	396/71	—
	5790102	8/4/1998	NASSIMA	Footnote 96 -- Special Interest	345/163	Yes
	5805138	9/8/1998	BRAWNE ETAL	Cited for Related Interest	345/156	—
	5812114	9/22/1998	LOOP	Footnote 35 -- Special Interest	345/157	—
	5815139	9/29/1998	YOSHIKAWA	Cited for Related Interest	345/157	—
	5828363	10/27/1998	YANIGER ETAL	Cited for Related Interest	345/156	—
	5831696	11/3/1998	MARSHALL ETAL	Cited for Related Interest	345/161	—
	5835977	11/10/1998	KAMENTSER ETAK	Cited for Related Interest	73/862.05	—
V	4786764	11/22/1998	Padula et al	Footnote ?? -- Special Interest	178/18	—

Examiner
Signature

/Doon Chow/

Date
Considered

05/27/2006

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Examiner Initials	US Patent Number	Publication Date	Patentee or Applicant Name	Relevant Information	US Class	Previously Submitted
DC	5847305	12/8/1998	YOSHIKAWA ETAL	Footnote 45 - Special Interest	84/634	Yes
	5847639	12/8/1998	YANIGER	Cited for Related Interest	338/99	Yes
	5847694	12/8/1998	REDFORD ETAL	Footnote 31 - Special Interest	345/158	Yes
	5847698	12/8/1998	REAVY ETAL	Cited for Related Interest	345/173	Yes
	5854624	12/29/1998	GRANT	Cited for Related Interest	345/169	Yes
	5853326	12/29/1998	GOTO ETAL	Cited for Related Interest	463/37	Yes
	5854622	12/29/1998	BRANNON	Cited for Related Interest	345/161	Yes
	5867808	2/2/1999	SELKER ETAL	Cited for Related Interest	702/41	Yes
	5872521	2/16/1999	LOPATUKIN ETAL	Cited for Related Interest	340/7.52	Yes
	5883619	3/16/1999	HO ETAL	Cited for Related Interest	345/163	Yes
	5889236	3/30/1999	GILLESPIE ET AL	Cited for Related Interest	178/18.01	Yes
	5889507	3/30/1999	ENGLE ETAL	Footnote 17 - Special Interest	345/161	Yes
	5889236	3/30/1999	GILLESPIE ETAL	Cited for Related Interest	187/18.01	Yes
	5895471	4/20/1999	KING ETAL	Cited for Related Interest	707/104.1	Yes
	5898359	4/27/1999	ELLIS	Cited for Related Interest	338/47	Yes
	5898425	4/27/1999	SEKINE	Footnote 19 - Special Interest	345/168	Yes
	5909207	6/1/1999	HO	Cited for Related Interest	345/156	Yes
	5910798	6/8/1999	KIM	Footnote 27 - Special Interest	345/163	Yes
	5910882	6/8/1999	BURRELL	Footnote 76 - Special Interest	361/681	Yes
	5917779	8/29/1999	RALSON ETAL	Cited for Related Interest	368/83	Yes
	5923317	7/13/1999	SAYLER ETAL	Footnote 36 - Special Interest	345/156	Yes
	5923267	7/13/1999	BEUK ETAL	Cited for Related Interest	340/825	Yes
	5943044	8/24/1999	MARTINELLI ETAL	Footnote 26 - Special Interest	345/174	Yes
	5948066	9/7/1999	WHALEN ETAL	Footnote 44 - Special Interest	709/229	Yes
	5952631	9/14/1999	MIYAKI	Cited for Related Interest	200/6A	Yes
	5963196	10/5/1999	NISHIUMI ETAL	Cited for Related Interest	345/161	Yes
	5966117	10/12/1999	SEFFERNICK ETAL	Cited for Related Interest	345/161	Yes
	5974238	10/26/1999	CHASE	Cited for Related Interest	709/248	Yes
	5973668	10/26/1999	WATANABE	Cited for Related Interest	345/157	Yes
	5983004	11/9/1999	SHAW ETAL	Footnote 78 - Special Interest	709/227	Yes
	5984785	11/16/1999	TAKEDA ETAL	Cited for Related Interest	463/38	Yes
	5991594	11/23/1999	FROEBER ETAL	Cited for Related Interest	434/317	Yes
	5995026	11/30/1999	SELLERS	Footnote 28 - Special Interest	341/34	Yes
	5995319	11/30/1999	TANIGAWA ETAL	Cited for Related Interest	360/90	Yes
	5999084	12/7/1999	ARMSTRONG	Cited for Related Interest	338/114	Yes
	5999808	12/7/1999	LADUE	Footnote 49 - Special Interest	455/412.2	Yes
	6001014	12/14/1999	OGATA ETAL	Footnote 66 - Special Interest	463/37	Yes
	6004210	12/21/1999	SHINOHARA	Cited for Related Interest	463/36	Yes
	6020884	2/1/2000	MACNAUGHTON ETAL	Cited for Related Interest	345/747	Yes
	6027828	2/22/2000	HAHN	Footnote 56 - Special Interest	429/100	Yes
	6037954	3/14/2000	MCMAHON	Cited for Related Interest	345/169	Yes
	6040821	3/21/2000	FRANZ ETAL	Cited for Related Interest	345/169	Yes
	6049812	4/11/2000	BERTRAM ETAL	Footnote 29 - Special Interest	715/516	Yes
	6049323	4/11/2000	ROCKWELL ETAL	Cited for Related Interest	345/784	Yes
	6059660	5/9/2000	TAKADA ETAL	Cited for Related Interest	463/38	Yes
	6060701	5/9/2000	MCKEE ETAL	Cited for Related Interest	219/681	Yes
	6064766	5/16/2000	SKLAREW	Cited for Related Interest	382/189	Yes
	6067005	5/23/2000	DEVOLPI	Cited for Related Interest	338/47	Yes
	6067863	5/30/2000	FAVRE ETAL	Cited for Related Interest	73/862.68	Yes
	6072469	6/6/2000	CHEN ETAL	Cited for Related Interest	345/157	Yes
✓	6073034	6/6/2000	JACOBSEN ETAL	Cited for Related Interest	455/566	Yes
	6102802	8/15/2000	ARMSTRONG	Cited for Related Interest	463/37	Yes

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/Doon Chow/

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Examiner Initials	US Patent Number	Publication Date	Patentee or Applicant Name	Relevant Information	US Class	Previously Submitted
DC	8112014	8/29/2000	KANE	Footnote 40 -- Special Interest	358/1.16	—
	8118979	9/12/2000	POWELL	Footnote 46 -- Special Interest	340/7.6	Yes
	8124845	9/26/2000	TODA ETAL	Cited for Related Interest	345/157	—
	8135886	10/24/2000	ARMSTRONG	Cited for Related Interest	463/37	Yes
	8153843	11/28/2000	DATE ETAL	Cited for Related Interest	200/339	—
	8157935	12/5/2000	TRAN ETAL	Cited for Related Interest	715/503	Yes
	8157381	12/5/2000	BATES ETAL	Cited for Related Interest	345/786	—
	8178338	1/23/2001	YAMAGISHI ETAL	Cited for Related Interest	455/566	—
	8177926	1/23/2001	KUNERT	Footnote 71 -- Special Interest	345/173	—
	8185158	2/8/2001	ITO ETAL	Cited for Related Interest	368/37	—
	8198473	3/6/2001	ARMSTRONG	Cited for Related Interest	345/163	Yes
	8198948	3/6/2001	SUDO ETAL	Footnote 43 -- Special Interest	455/566	Yes
	8198472	3/6/2001	LECTION ETAL	Cited for Related Interest	345/161	—
	8208271	3/27/2001	ARMSTRONG	Cited for Related Interest	341/34	Yes
	8222525	4/24/2001	ARMSTRONG	Cited for Related Interest	345/161	Yes
	8231444	5/15/2001	GOTO ETAL	Footnote 47 -- Special Interest	463/37	Yes
	8239786	5/29/2001	BURRY ETAL	Cited for Related Interest	345/161	—
	8256011	7/3/2001	CULVER	Footnote 63 -- Special Interest	345/157	Yes
	8262406	7/17/2001	MCKEE ETAL	Footnote 72 -- Special Interest	219/681	—
	8262406	7/17/2001	MCKEE ETAL	Cited for Related Interest	219/681	—
	8275138	8/14/2001	MAEDA	Cited for Related Interest	338/47	—
	8285356	9/4/2001	ARMSTRONG	Cited for Related Interest	345/167	—
	8310606	10/30/2001	ARMSTRONG	Cited for Related Interest	345/161	—
	8321158	11/20/2001	DELORME ETAL	Footnote 69 -- Special Interest	701/201	—
	8328948	12/4/2001	KOBACHI ETAL	Footnote 65 -- Special Interest	345/157	Yes
	8343991	2/5/2002	ARMSTRONG	Cited for Related Interest	463/37	—
	8344791	2/5/2002	ARMSTRONG	Cited for Related Interest	338/114	—
	8347997	2/19/2002	ARMSTRONG	Cited for Related Interest	463/37	—
	8351205	2/26/2002	ARMSTRONG	Cited for Related Interest	338/114	—
	8352477	3/5/2002	SOMA ETAL	Cited for Related Interest	463/36	Yes
	8400303	6/4/2002	ARMSTRONG	Cited for Related Interest	341/176	—
	8415707	8/9/2002	ARMSTRONG	Cited for Related Interest	99/280	—
	8404584	6/11/2002	ARMSTRONG	Cited for Related Interest	360/88	—
	8422941	7/23/2002	THORNER ETAL	Cited for Related Interest	463/30	Yes
	8424336	7/23/2002	ARMSTRONG	Cited for Related Interest	345/159	—
	8456778	9/24/2002	ARMSTRONG	Cited for Related Interest	386/46	—
	8469691	10/22/2002	ARMSTRONG	Cited for Related Interest	345/159	—
	8470078	10/22/2002	ARMSTRONG	Cited for Related Interest	378/93.18	—
	8498449	12/17/2002	ARMSTRONG	Cited for Related Interest	345/159	—
	8504527	1/7/2003	ARMSTRONG	Cited for Related Interest	345/159	—
	8518953	2/11/2003	ARMSTRONG	Cited for Related Interest	345/159	—
	8524187	2/25/2003	KOMATA	Cited for Related Interest	463/37	Yes
	8529185	3/4/2003	ARMSTRONG	Cited for Related Interest	345/159	—
	8532000	3/11/2003	ARMSTRONG	Cited for Related Interest	345/159	—
	8538638	3/25/2003	ARMSTRONG	Cited for Related Interest	345/159	—
	8559831	5/6/2003	ARMSTRONG	Cited for Related Interest	345/159	—
	8563415	5/13/2003	ARMSTRONG	Cited for Related Interest	338/47	—
✓	8424333	7/23/2002	TREMBLAY ET AL	Cited for Related Interest	345/156	—
	8275213	8/14/2001	TREMBLAY ET AL	Cited for Related Interest	345/156	—

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23

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DC	Application Number: 09/893,292						
	Filing Date: June 26, 2001						
	First Named Unit: Brad A. Armstrong						
	Group Art Unit: 2873						
	Examiner's Name: D. Chow						
	Applicant File Number: F28						
EXAMINER INITIALS	NON PATENT LITERATURE DOCUMENTS AND OTHERS REFERENCES	Additional Data in Footnote	Previously Submitted				
DC	Mouse Ball-Actuating Device with Force and Tactile Feedback", IBM Disclosure Bulletin, vi 32, No. 9B, Feb. 1990, pp. 230-235	Footnote 2 -- Special Interest	Yes				
	Research Disclosures, vol. 283, Nov. 1987 (USA) "Joystick with Tactile Feedback"		Yes				
	Development of a General Purpose Hand Controller for Advanced Teleoperation" KV Siva, Harwell Laboratory, UK, July 1988	Footnote 12 -- Special Interest					
	The "CyberMan" 3D Controller by Logitech Inc. of Fremont California, USA. Provided herewith is a two page advertisement flyer; detailed photographs and a description of the photographs in the Information Disclosure Statement included herewith.	Footnote 9 -- Special Interest					
	Kambic "Keyboard Switch with Stroke and Feedback Enhancement Using Vertically Conducting Elastomer in a Laterally Conducting Mode", IBM Technical Disclosure Bulletin, Volume 20, No. 5, October 1977, pp. 1833-1834	Footnote 22 -- Special Interest	Yes				

Examiner Signature	/Doon Chow/	Date Considered	05/27/2006
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EXAMINER INITIALS	NON PATENT LITERATURE DOCUMENTS AND OTHERS REFERENCES	Additional Data In Footnote	Previously Submitted				
DC	A manual titled: Universal Serial Bus (USB), Device Class Definition For Human Devices, Firmware Specification-Oct. 14, 1998, Version 1.1 draft which was printed on the Internet site of www.usb.org in Nov. 1998						
	Search results titled Questel-Orbit QWEB dated December 1999, pages 1-24 having short descriptions / abstracts thereon are submitted herewith by Applicant for study.		Yes				
	A hand held controller for video games by Namco Co. has a button to drive a gear and rotate a rotary potentiometer which creates an analog signal change based on positional change; to be considered prior art to some of Applicant's claims. Photographs and a written description is provided in the Information Disclosure Statement.						
	Flightstick Pro" by CH Products, San Marcos, California USA, a joystick which uses a gimbal and rotary potentiometers, the joystick is prior art sold in stores.						
	Known prior art are rotary operated potentiometers which have an Off position usually in the far counterclockwise direction of rotation and an audible "click" is provided when rotated in and out of the Off position. Such potentiometers are variable output electrical devices controlled by rotation.						

Examiner Signature	/Doon Chow/	Date Considered	05/27/2006
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